

Amendment: Specification

Please rewrite the paragraph beginning on page 48, line 5 as follows:

C2

FIG. 19 shows a time-domain representation of a plurality of frequency-domain encoded signals. Each pulse 1, 2, 3, 4, and 5 represents a CIMA signal having three ($M=3$) multi-frequency carrier signals. CIMA enables $2M$ quasi-orthogonal signals $s_{n=2M}(t)$ in the time domain, whereas carrier processing yields only M equations. This increase is attributed to the exploitation of both in-phase and quadrature-phase subcarriers, which is enabled by the complex-valued codes that map data to the individual time-domain pulses 1-5. Since the quality of quasi-orthogonal signals can be improved using multi-user detection (which involves the same processes as interference cancellation), processing signals in a diversity-parameter domain that enables quasi-orthogonality of the signals being processed increases the capacity of the communication system. This realization may be extended to many different diversity-parameter domains. For example, many types of multicarrier-defined diversity-parameter domains (such as frequency) may be used to generate CIMA signals that can be processed in the time domain. One of the benefits of alternative diversity-parameter processing is that, in some cases, the benefits of both diversity and enhanced capacity can be obtained.